HOW IT WORKS

the science
behind the magic

HOME MADE FERTI LIZER

starve the landfills, feed your garden

"LIKE COMPOSTING - ON FAST FORWARD."

Using an intuitive three-phase cycle, the FoodCycler pulverizes and aerates nearly all types of food waste, breaking down your organics to a tenth of their original volume.

Agitators quietly turn inside the grinding bucket, reducing food waste to small particles. Simultaneously, the unit aerates and heats the bucket contents, decomposing and sterilizing the by-product entirely.

The unique carbon filter filtration system eliminates any odors generated by the decomposition process, making it perfect for indoor use.

While the by-product does not have the same microbial or bacterial qualities as traditional compost, it is still rich in important nutrients, with an average NPK of 4-1-1. The by-product is scientifically proven to be beneficial for optimal vegetation growth, as we shall see.

To put it simply, the FoodCycler is a bit like composting on fast forward. Traditional compost, and composting alternatives (such as vermicompost systems and compost tumblers) can take weeks, if not months, to transform food waste into a garden-ready supplement that is high in various micro and macro nutrients, as well as crucial organic biomatter.

Because of the intense aeration, heating and pulverization of the unit's full cycle, this process is sped up to complete within 3-8 hours. Cycling also ensures that meat, dairy and even some bones and processed foods can be added to the cycle. The level of heat emitted by the unit during the cycle is sufficient to completely eliminate all bacteria and potential pathogens, making the by-product a sterile biomass which can be stored in an air-tight or open container for up to one year following cycling. All food is reduced by up to 90% of its original volume, regardless of food type.
Winter composting is oftentimes not possible for the average gardening-enthusiast, as compost systems require a minimum internal temperature to break down organics, and this temperature is nearly impossible to reach in below-freezing conditions.

The FoodCycler is what happens when you combine naturally-occurring processes with technological innovation and simple, yet elegant design. This small-but-mighty machine is the everyman and woman's food recycler, for a future free of waste.

"TECHNOLOGICAL INNOVATION, SIMPLE DESIGN."

THE SCIENCE BEHIND THE MAGIC

THE TESTING METHOD

Four garden plots were isolated and given equal amounts of water, sunshine and space. Tomato seeds were planted in each separate plot at the same time. Each plot, apart from the control (soil alone), was combined with the suggested amount of FoodCycler by-product, by-product combined with "Foodilizer" probiotic tablet mixture, and probiotic tablet mixture alone, respectively.

NUTRIENT ANALYSIS

Your plant's soil requires three macro-nutrients to reach optimal stem growth (height and weight, or "total biomass"), leaf volume and leaf number. While your garden soil also benefits from a host of other micro-nutrients (up to 15), the majority of both organic and synthetic fertilizers contain these primary macro-nutrients, namely Nitrogen (N), Phosphorus (P) and Potassium (K).

NITROGEN (N) LEVELS

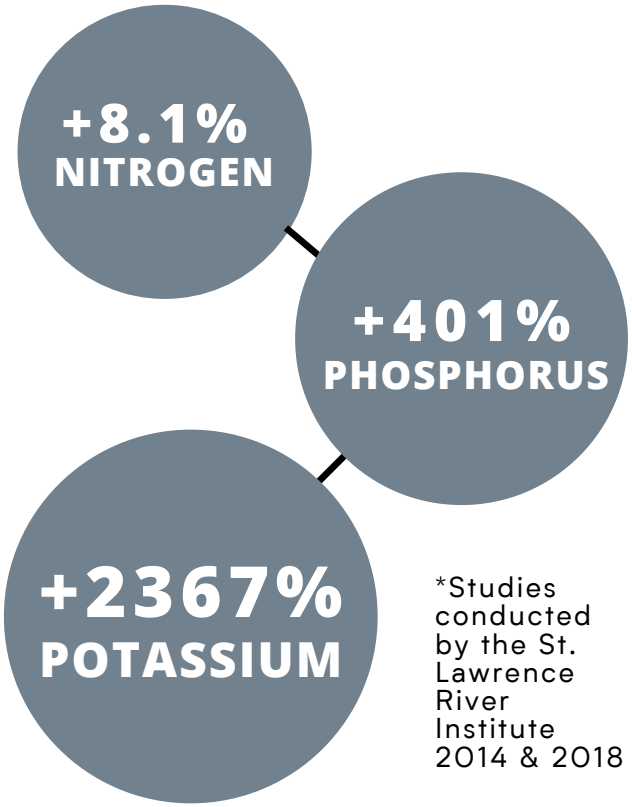
By the end of the testing period, total nitrogen in the soil combined with the by-product displayed an average increase of 8.1% compared to the control.

PHOSPHORUS (P) LEVELS

Phosphorus levels in the test plot soil increased by 401% over the course of two weeks.

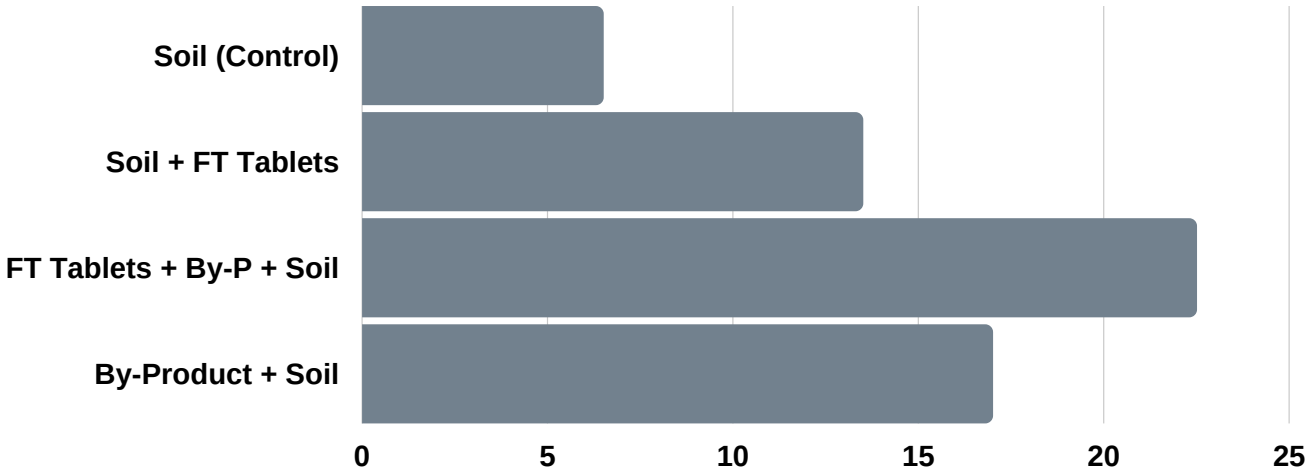
POTASSIUM (K) LEVELS

Total potassium in the soil increased by 2367% over the two week period.



*Studies conducted by the St. Lawrence River Institute 2014 & 2018

AVERAGE SPROUT STEM GROWTH (WIDTH & HEIGHT AVERAGED) 4 WEEKS POST-APPLICATION



MICROBIAL REACTIVATION

The FoodCycler's by-product is not compost, nor can it be used in lieu of compost. Rather than acting as a soil composite, the organic fertilizer produced by the machine is a soil amendment, and can be added to the soil to enrich the soil, increase nutrient parts-per-million, strengthen root structures and stems and enhance plant growth.

One study performed on the by-roduct measured the potential for microbial reactivation, and determined that, when combined with Foodilizer Tablets, the by-product will see an increase of bacterial growth, and supplement the by-product's already impressive nutrient ratio. The by-product is a sterile biomass with a negligible average of 1<10 ppm of E. coli (effectively zero).

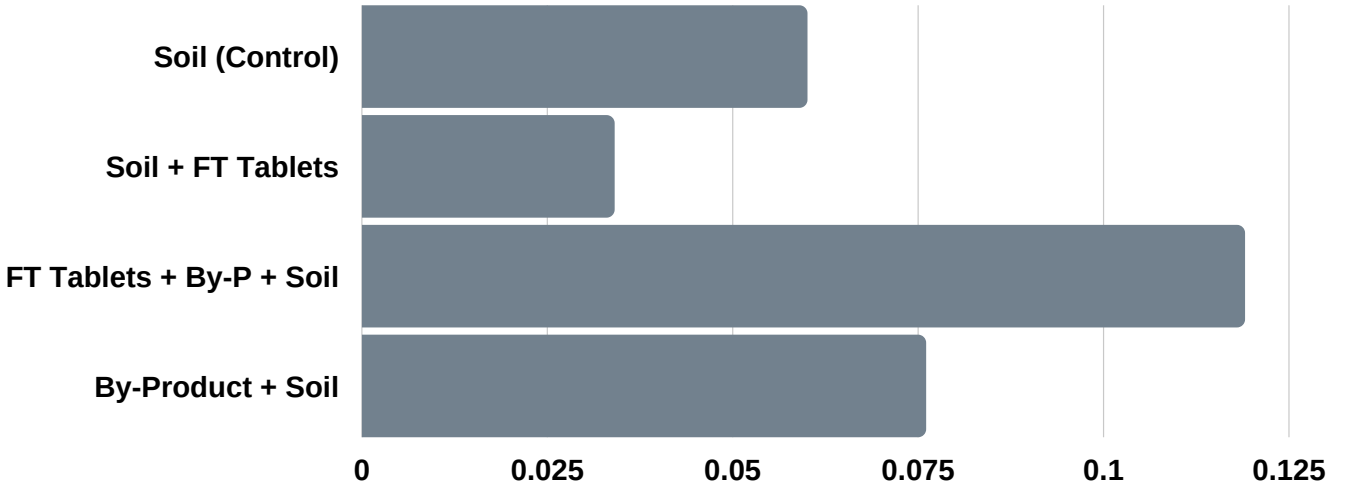
Despite being completely free of bacteria and pathogens, once incorporated into the soil, the by-product will continue to break down, releasing valuable micro and macro nutrients, while adding an average of 919 400 ppm of organic matter into the soil. The latter process is crucial to the natural life cycle of soil and organic decay, and the bedrock of composting science.

BY-PRODUCT ADDS

+919 400 PPM

OF BIOMATTER (ORGANIC MATTER)

AVERAGE SPROUT STEM WEIGHT (GRAMS) 4 WEEKS POST-APPLICATION



TO SUMMARIZE

While the FoodCycler soil amendment is not technically compost based on the majority of (but not all) municipal and legislative regulations, it is still a valuable and energy efficient form of fertilizer and organic matter composite. Further, the FoodCycler by-product will eventually regenerate much of the bacteria lost during the cycle once incorporated into the soil, essentially speeding up and reversing the natural composting cycle for similar results over time. If the home gardener would like to speed up this process of organic matter soil integration, FoodCycler also offers probiotic tablets to increase the rate of bacterial growth between soil and amendment.